 **UNIVERSITY OF MAINE AT FARMINGTON**

**COLLEGE OF EDUCATION, HEALTH AND REHABILITATION**

**LESSON PLAN FORMAT**

**Teacher’s Name: Kiera Timme Lesson #:** 5 **Facet:** Explain  
**Grade Level:** Grade 8 **Numbers of Days:** 2   
**Topic:** Determining How Many Times Bigger or Smaller Two Values Are  
  
**PART I:**  
  
**Objectives**  
Student will understand that scientific notation has real world applications  
Student will know magnitude, more than, less than, how many times larger/smaller  
Student will be able to demonstrate how many times bigger (or smaller) one value, expressed in scientific notation, is compared to another.   
  
**Product:** Glogster (EDU)   
  
**Common Core State Standards**  
**Content Area:** Mathematics  
**Grade Level:** Grade 8  
**Domain:** *Expressions and Equations*  
**Cluster:** *Work with radicals and integer exponents.*  
**Standard:** *Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is smaller than the other. For example, estimate the population of the United States as 3 x 10^8 and the population of the world as 7 x 10^9, and determine that the world population is more than 20 times larger.*  
  
**Rationale:** In this lesson students will investigate the real world uses for data expressed in scientific notation. Students will compare values and determine which value is larger/smaller, and by how much.  
  
**Assessments**   
  
**Formative (Assessment for Learning)**  
**Section I – checking for understanding during instruction**  
Students will use their math journals to summarize their understanding of how to compare values expressed in scientific notation. Partner groups will compare notes with at least two other groups to discuss, compare, and assess their graphic organizers. I will also review the graphic organizers from each pairing to check for understanding.  
  
**Section II – timely feedback for products (self, peer, teacher)**  
Students will use their graphic organizers and a checklist to help them create their Glogster posters. During the peer review session, students will use the same checklist plus and peer evaluation form to provide feedback. Students will be provided with an opportunity to make adjustments based on their classmates' evaluations. After the peer review, I will review each Glogster electronically using the same checklist, and provide timely feedback, so that students can make the recommended adjustments.  
  
**Summative (Assessment of Learning):**  
Students will create a digital poster showing fellow 8th graders how to compare values expressed in scientific notations. The poster must also provide information about why we use scientific notation, and in what fields/occupations it is used. The poster can include any images, videos, music/sounds that will help it grab attention and get students other interested in scientific notation. All sources must be cited.  
  
**Integration**  
**Technology:**   
Students will use Glogster (EDU) to create an informative poster about scientific notation. This product will also provide students with an opportunity to develop their digital citizenship skills (when using and citing online sources).  
  
**Content Areas:**   
*English/Language Arts* - Students will be writing in reflective journals (on-going). Students will also be required to state in words each step they made, and why they made it, on their graphic organizer. Since they are creating a Glogster poster, student work will require they develop their source citing skills.  
*Art (New Media)* - Students will have creative control of the overall aesthetic of their product. Their task also requires they create a product that would appeal to other students.  
*Science* - Scientific notation is used in many scientific fields. When students create their product they must also provide information about an occupation (or occupations) that use scientific notation.  
  
**Groupings**   
**Section I - Graphic Organizer & Cooperative Learning used during instruction**  
During the lecture/class discussion about scientific notation, each student will be provided with a ladder graphic organizer for note taking. Students will be provided with additional copies of the graphic organizer to complete with their value comparisons. With a partner, students will use the ladder organizer to track each step used to compare the difference/magnitude of two values expressed in scientific notation, using the "You Go, I Go" method.  
  
**Section II – Groups and Roles for Product**  
Students will be assigned a partner using hidden post-its activity (see PART II). Students will work with the same partner assigned during the in-class activity to create the Glogster. During the in-class activity students will work collaboratively with the partner to complete their graphic organizers. Students will be jointly responsible for the creation of their product. To ensure an equitable division of labor, each student will be required to complete a Google Form survey regarding their contribution to the final product.  
  
**Differentiated Instruction**  
  
**MI Strategies**  
  
**Verbal:** Students will include written explanations for each step they made on their ladder when comparing values expressed in scientific notation.  
**Logic:** Students will develop their logical thinking skills, and deepen their understanding, when verbally communicating each step they made on their graphic organizer, as well as the reasons why.  
**Visual:** Students will use the Ladder graphic organizer to highlights the steps necessary to compare values expressed in scientific notation. The students will also use a variety of graphics and videos to create their Glogster products.  
**Kinesthetic:** During the relay activity, students will take turns to solve each step in a problem written on the whiteboard.  
**Musical:** The Glogster activity will be students the options to include music and videos in their product.  
**Interpersonal:** During the "YouGo, IGo" activity, students will have to communicate with their partners before moving on to the next step. Students will also work with a partner when creating their Glogster.  
**Naturalistic:** The "hook" features images of space as a way to connect the content to the real world.  
  
  
**Modifications/Accommodations**  
***From IEP’s ( Individual Education Plan), 504’s, ELLIDEP (English Language Learning Instructional Delivery Education Plan)*** *I will review student’s IEP, 504 or ELLIDEP and make appropriate modifications and accommodations.*  
  
**Plan for accommodating absent students:**  
The class will have its own Wiki website. All handouts and assignments will be posted on the class wiki. At the end of the class period any SmartBoard presentations will also be uploaded onto the wiki. All students will also be provided with links to an online video that relates to the content being taught to supplement instruction. Anytime a new technology in introduced a student/teacher created screencast or manufacturer tutorial will be posted into the class wiki as a guide on how to use this technology.  
  
**Extensions**  
  
**Type II technology:**  
Students will use Glogster (EDU) to create an informative poster about scientific notation. This product will also provide students with an opportunity to develop their digital citizenship skills (when using and citing online sources).  
  
**Gifted Students:**  
During the class lesson and when student create their products, they will be given a menu of problem choices. From this menu, every student/group will choose two entrees and a choice of two problems from the starters and desserts. These problems will be tiered. Entrees will be designed to meet the standard, Starters will be for designed for students who are working towards the standard, and Dessert will be designed to exceed the standard as a form of extension.  
  
**Materials, Resources and Technology**  
*List all the items you need for the lesson.*

* My laptop
* Student laptop
* SmartBoard (sign-up for this)
* Ladder graphic organizer
* Glogster (EDU) tutorial link/screencast
* Whiteboard
* Whiteboard markers
* Updated class wiki
* Checklist
* Handout regarding citing sources
* Link to information about citing sources
* Student product contribution self-evaluation (Google Form)
* Textbook
* Problems menu (posted onto class wiki)
* Calculators
* Post-It Notes

**Source for Lesson Plan and Research**  
*List all URL and describe.*  
**HOOK - STAR TREK INTRO:**  
<http://www.youtube.com/watch?v=DOryEhRTP7A>  
**Glogster (EDU) Tutorials:**  
<http://edu.glogster.com/?page=videos&cat=GettingStarted>  
**Video Tutorial - Comparing Values Expressed in Scientific Notation**  
Comparing Larger Numbers: <https://www.youtube.com/watch?v=R5_oiQCk0hc>  
Comparing Small Numbers: <https://www.youtube.com/watch?v=20fOhrPDCvg>  
**Group Collaboration Google Form:**  
linked to class wiki (www.wikispaces.com)  
**Peer Evaluation Google Form:**  
linked to class wiki (www.wikispaces.com)  
**Class wiki:**  
www.wikispaces.com  
**Citing Sources guide - Owl Purdue Writing Resources:**  
<http://owl.english.purdue.edu/owl/resource/589/01/>  
**Creative Commons website:**  
<http://search.creativecommons.org/>  
  
**PART II:**  
  
**Teaching and Learning Sequence (Describe the teaching and learning process using all of the information from part I of the lesson plan)** Take all the components and synthesize into a script of what you are doing as the teacher and what the learners are doing throughout the lesson. Need to use all the WHERETO’s. (3-5 pages)  
  
*Classroom Arrangemen*t: Students will be arranged into table groups of two  
  
**Agenda:**  
Day One (80 minutes):

* Attendance (3 minutes)
* Hook (5 minutes)
* Post-It Grouping activity (7 minutes)
* SmartBoard Lecture & Group Discussion about comparing larger values expressed in scientific notation (10 minutes)
* Ladders Graphic Organizer with "You Go, I Go" activity (15 minutes)
* SmartBoard Lecture & Group Discussion about comparing small values expressed in scientific notation (10 minutes)
* Ladders Graphic Organizer with "You Go, I Go" activity (15 minutes)
* Relay Activity/Game (10 minutes)
* Journaling (5 minutes)

**Assignment**: Complete graphic organizers if incomplete. Explore Glogster (EDU), watch tutorials and set up account. Search Glogster EDU for a math themed poster that you really liked (be prepared to share it with the class).  
  
  
Day Two (80 minutes)

* Attendance (3 minutes)
* Class discussion on any areas that are still unclear (10 minutes)
* Relay Activity/Game (10 minutes)
* Glogster "likes" Share - Gallery Walk (10 minutes)
* Create Glogster Posters\* (42 minutes)
* Journaling (5 minutes)

\*NOTE: Check student graphic organizers for their understanding.  
  
**Assignment**: Finish up Glogster and link onto class wiki by specified deadline. Go to class wiki and complete a peer evaluation Google form for each team’s Glogster poster by specified deadline.  
  
Students will understand that scientific notation has real-world applications. Certain occupations depend on scientific notation in order to be effective at their job. Astronomers calculate the distance between planets and stars, some of which wouldn't even fit on a calculator screen, or an A4 pag**e.** *Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is smaller than the other. For example, estimate the population of the United States as 3 x 10^8 and the population of the world as 7 x 10^9, and determine that the world population is more than 20 times larger.* The [Star Trek Intro](http://www.youtube.com/watch?v=DOryEhRTP7A) hook is intended to be a fun way to appeal to the students’ imagination. It is also intended to help them appreciate the application of scientific notations, specifically when it comes to careers involving the study of space and the universe.  
**Where, Why, What, Hook Tailors:** Visual, Musical, Naturalistic  
  
Student will know magnitude, more than, less than, how many times larger/smaller (*see content notes*). First partners will be assigned using the "Post-It Activity." Prior to the start of the lesson I will place post-it notes under each chair. These post-it notes will contain numbers. Each number expressed in scientific notation will have a corresponding number expressed in decimal/standard form on another post-it. To find their partners, students must find the post-it under their chair, and then locate the classmate who has a post-it note with the corresponding value. Once students are seated with their partners, we will begin by having a lecture and class discussion about how to compare large values numbers expressed in scientific notation. In order to maintain student interest, lectures/discussions will be spaced out. As such, after each component lecture/discussion, students will partner up to complete the ladder graphic organizer activity. Students will use the ladder organizer to track the step to converting decimals to scientific notation and vice versa, using the "YouGo, IGo" method. This involves alternating between each student, with each only doing one line of the problem. They cannot move on to the next step unless they both agree with the last move. Once finished students will write, in words, what they did next to each step. Partner groups will then compare notes with at least two other groups to discuss and assess their graphic organizers. After the lecture component students will participate in the "Relay Activity/Game" (*see content notes*) which I will use as a way to check for understanding. Students will then reflect on the lesson, and summarize their understanding, by writing in their journals. In addition, the start of day two will also include an opportunity for students to review the material from lesson one, and address any aspects that are still unclear.  
**Equip, Explore, Rethink, Tailors:** Verbal, Kinesthetic, Logic, Visual, Interpersonal, Intrapersonal  
  
Student will be able to demonstrate how many times bigger (or smaller) one value, expressed in scientific notation, is compared to another. During the second day, students will be given time to work with their partners to create their Glogster posters. Students will be given a menu of problem choices to use when creating their products. Students must choose two problems from the entrees and one problem from either the starters or desserts. These problems will be tiered. Entrees will be designed to meet the standard, Starters will be for designed for students who are working towards the standard, and Dessert will be designed to exceed the standard as a form of extension. ALL students will have the option to create their own problems; however, these must be pre-approved by the teacher. Students will create a digital poster showing fellow 8th graders how to compare values expressed in scientific notations. The poster must also provide information about why we use scientific notation, and in what fields/occupations it is used. The poster can include any images, videos, music/sounds that will help it grab attention and get students other interested in scientific notation. All sources must be cited. Students are to make use of their graphic organizers to begin the prep work for their Glogster. Each problem they choose from the problems menu must be worked out of the ladder graphic organizer. Students will use their graphic organizers and a checklist to help them create their Glogster posters. During the peer review session, students will use the same checklist, plus a peer evaluation form, to provide feedback. During class, while students are creating their products, I will provide feedback regarding the graphic organizer as well as on their Glogster products at that point.  
**Explore, Experience, Rethink, Revise, Refine, Tailors:** Interpersonal, Intrapersonal, Verbal, Logical, Visual, Musical  
  
Students will use their journal entries, graphic organizers and a checklist to help create and self-assess their products. Students will also have an additional opportunity to make adjustments based on peer feedback. I will review their Glogster products electronically and then use the same checklist to provide feedback so they can make adjustments before the final grading is completed. In order to indicate that they are ready for the products to be assessed, students will post a link to their blog onto the class wiki. The homework assignments are designed to provide students with an opportunity to better acquaint them with the technology we will be using in a risk free way, and as a way to begin thinking about what elements make for an effective Glogster poster.  
**Evaluate, Tailors:** Verbal, Visual, Interpersonal, Intrapersonal, Logical  
  
**Content Notes**   
Students will know…..   
*Definitions:*

* *Magnitude*
* *More Than vs. Less Than*
* *Relay Activity/Game*
* *Value Comparison: How Many Time Larger/Smaller is one value compared with another*

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**Important Vocabulary**

Magnitude: The relative size of an object

More Than & Less Than:

* A number is *less than* a given number if it lies to the *left* of that number on the number line.
* Number line from -10 to 10. From left to right: -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10A number is *greater/more than* a given number if it lies to the *right* of that number on the number line.

**Value Comparison:** How Many Time Larger/Smaller is One Value Compared with Another

**GOAL**: Compare numbers expressed in the form of a single digit times an integer power of 10 and

determine how many times larger one is than the other.

1. Before addressing the numbers expressed in scientific notation, provide examples comparing how many times larger a whole number is compare to another

Examples: 10 vs. 2 10 is 5 times larger than 1.

3 vs. 9 9 is 3 times larger than 3.

We determine how many times larger one number compared to another, by *dividing* the larger number by the smaller number.

1. Now let’s compare values expressed as powers of 10.

Examples:

1. 103 vs. 101 = 1,000 vs. 10

1000 is 100 times larger than 10

So…. 103 is 100 (102) times larger than 10

1. 10-4 vs. 10-8 = .0001 vs. .00000001

.0001 is 10,000 times larger than .00000001

So…. 10-4 is 10,000 (104) times larger than 10-8

From both of these examples, we can see then pattern of simply subtracting the exponents, rather than rewriting in standard notation and dividing.

1. Now we put the last two concepts together:

Example:

Since we are dividing to see how much larger one is versus the other we can rewrite the problem as:

(8 x 103) ÷ (2 x 10)

1. 8 x 103 vs. 2 x 10

We can then rewrite (8 x 103) ÷ (2 x 10) as a fraction:

We then separate the problems into 2 fractions (unit number and power terms):

=

Then we simplify: = 4 x = 4 x 100 = 400

So 8 x 103 is 400 times larger than 2 x 10

1. 2 x 104 vs. 4 x 102

= = .5 x = .5 x 100 = 50

So 2 x 104 is 50 times larger than 4 x 102

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**TEACHER NOTE**: For this example, it would be beneficial to also show how we can use our properties of exponents (“shortcut” ) to solve these problems.

Ex: 2 x 104 is .5 x 102 larger than 4 x 102. And .5 x 102 is 50 in standard form.

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**Relay Game/Activity**

Room Arrangement:

Resources:

* Whiteboard Markers
* Flashcards with problems on back
* Masking Tape

Divide the classroom in two, using a single row of student’s desk/chairs.

Groupings:

Split the class into two relay groups

Instructions:

1. Arrange the teams on either side of the dividing line. Students need to line up, one behind the other, with the leading person facing the whiteboard. Teams should be waiting a few feet away from the white board (use tape to mark the line students must stay behind). MAKE SURE THE SPACE BETWEEN THE BOARD AND THE LINE IS CLEAR!
2. Divide the flashcard problems into two sets. Place half on the flashcards on the board for the first team, and the other set on the side of the board accessible by the second team.
3. Student Instructions:
   * Sit down in your rows facing the whiteboard
   * Your task is to solve the problems written on the flashcard as a team
   * Students will (safely) race to the board, one by one, but will only complete one step needed to solve the problem.
   * Once a student has solved one line/step of the given problem, they must race back with the marker (acting as a relay baton) so their teammate can do the next line.
   * Students who have just returned must seat at the back of the line.
   * This process will continue until each problem is complete.
   * You cannot move on to the next problem until the teacher confirms the solution is correct.
   * C:\Users\Kiera Jay\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\4ADHTMGM\MC900078837[1].wmfThe student who reads the flashcard is only required to write the problem on the board, then pass the marker to the next member of their team to complete the first step.
   * You may call out advice to your teammates, but only if they ask for your help.
   * The winning team is whoever successfully completes their set of problems first.
   * NO CALCULATORS (unless instructed otherwise)

**Handouts**  
*Ladder Graphic Organizer*  
*Checklist*  
  
  
**Maine Common Core Teaching Standards for Initial Teacher Certification and Rationale**  
  
**Standard 1 – Learner Development. The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.**  
  
  
**Learning Styles**  
  
***Clipboard:*** This lesson is structured to incorporate sequential learning with clear procedures on how to master the content. Lesson expectations are clearly outlined both during the lesson and on the class wiki.  
  
  
***Microscope****:* This lesson allows for student self-discovery of the content. Students are encouraged to discuss the content with their peers, and to develop a sense of ownership of what they are learning. This is facilitated when students are required to work with a partner on each step, and then provide a verbal explanation of what they did and why they did it.  
  
  
***Puppy:*** Students are arranged in pairs to create a supportive atmosphere. At all times every effort will be made to ensure a positive and encouraging learning environment. In particular, during group discussion and presentation, students will be encouraged (and required) to actively listen to their peers comments. As glogster may be a new technology, students are given an opportunity to play with this new technology, as part of a homework assignment, in a risk free way.   
  
  
**Beach Ball**: The problems menu provides students with a choice in the problems they solve, including problems which extend the learning. The "relay" activity/game provides students with a physical element which adds a sense of spontaneity to the lesson.  
  
  
***Rationale:***This lesson is designed to review prerequisite knowledge, including any misconceptions, while also introducing new material in an engaging and meaningful way for all learning styles.   
  
  
**Standard 6 - Assessment. The teacher understands and uses multiple methods of assessment to engage learners in their on growth, to monitor learner progress, and to guide the teacher's and learner's decision making.**  
  
**Formative:** Students will use their math journals to summarize their understanding of how to compare values expressed in scientific notation. Partner groups will compare notes with at least two other groups to discuss, compare, and assess their graphic organizers. I will also review the graphic organizers from each pairing to check for understanding. Students will use their graphic organizers and a checklist to help them create their Glogster posters. During the peer review session, students will use the same checklist plus and peer evaluation form to provide feedback. Students will be provided with an opportunity to make adjustments based on their classmates' evaluations. After the peer review, I will review each Glogster electronically using the same checklist, and provide timely feedback, so that students can make the recommended adjustments.  
  
**Summative:**  
Students will create a digital poster showing fellow 8th graders how to compare values expressed in scientific notations. The poster must also provide information about why we use scientific notation, and in what fields/occupations it is used. The poster can include any images, videos; music/sounds that will help it grab attention and get students other interested in scientific notation. All sources must be cited.  
  
**Rationale:** A variety of assessment forms are used throughout this lesson which provides both the teacher to check for student understanding, and to allow students to assess their own understanding.  
  
  
**Standard 7 - Planning Instruction. The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.**  
  
**Content Knowledge:** Students will know how to compare large and small values expressed in scientific notation**.**  
  
**Common Core State Standards**  
**Content Area:** Mathematics  
**Grade Level:** Grade 8  
**Domain:** *Expressions and Equations*  
**Cluster:** *Work with radicals and integer exponents.*  
**Standard:** *Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is smaller than the other. For example, estimate the population of the United States as 3 x 10^8 and the population of the world as 7 x 10^9, and determine that the world population is more than 20 times larger.*  
  
**Facet: Explain**   
  
**Rationale:** Student will be able to demonstrate how many times bigger (or smaller) one value, expressed in scientific notation, is compared to another  
  
  
**Standard 8 - Instructional Strategies. The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.**  
  
**MI Strategies:**  
**Verbal:** Students will include written explanations for each step they made on their ladder when comparing values expressed in scientific notation.  
**Logic:** Students will develop their logical thinking skills, and deepen their understanding, when verbally communicating each step they made on their graphic organizer, as well as the reasons why.  
**Visual:** Students will use the Ladder graphic organizer to highlights the steps necessary to compare values expressed in scientific notation. The students will also use a variety of graphics and videos to create their Glogster products.  
**Kinesthetic:** During the relay activity, students will take turns to solve each step in a problem written on the whiteboard.  
**Musical:** The Glogster activity will be students the options to include music and videos in their product.  
**Interpersonal:** During the "YouGo, IGo" activity, students will have to communicate with their partners before moving on to the next step. Students will also work with a partner when creating their Glogster.  
**Naturalistic:** The "hook" features images of space as a way to connect the content to the real world.  
  
**Type II Technology:**  
Students will use Glogster (EDU) to create an informative poster about scientific notation. This product will also provide students with an opportunity to develop their digital citizenship skills (when using and citing online sources).  
  
**Rationale:** This lesson is designed to meet the needs of seven of the eight multiple intelligences in a meaningful and engaging way. Journaling, with its reflective components, and the ladder graphic organizer activity meets the needs of verbal learners. The relay activity provides an opportunity for kinesthetic with the content. Group work provides interpersonal learners with the opportunity to engage with their peers. The hook is fun way to emphasize the value of scientific notation in a way that would appeal to musical and visual students. The logical structure and sequence incorporated throughout the exploration of the content appeals to logical students, and the Glogster activity provide naturalist students with an opportunity to incorporate naturalist elements into their product.  
  
  
**NETS STANDARDS FOR TEACHERS**  
**1. Facilitates and Inspire Student Learning and Creativity. Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.**  
a. Promote, support, and model creative and innovative thinking and inventiveness  
  
b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources  
  
c. Promote student reflection using collaborative tools to reveal and clarify students’ conceptual understanding and thinking, planning, and creative processes  
  
d. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments  
  
**Rationale:** In this lesson students are assigned the task of creating, with a partner, an on-line study guide, using a type II technology. By doing so, students are not only using technology as a way demonstrate their learning, they are also sharing their knowledge through a virtual environment (Glogster).  
  
**2. Design and Develop Digital Age Learning Experiences and Assessments. Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop knowledge, skills, and attitudes identified in the NETS-S.**  
a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity  
  
b. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress  
  
c. Customize and personalize learning activities to address students’ diverse learning styles, working strategies, and abilities using digital tools and resources  
  
d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching  
  
**Rationale:** Through the use GlogSter (EDU), students are provided with the opportunity to explore and utilize a type II technology as a means to demonstrate their learning in a valid and creative way**.**